



# PORTSMOUTH INFORMATION RELEASE APPROVAL REQUEST

## I. Document / Information Description

(To be filled out by Requestor)

ID Number: \_\_\_\_\_ Originated Date: Dec 2006

Document Title or Identification: Exhibit M of DOE/GCEP Lease Agreement

Original Author(s) / Organization: DOE

Technical Editor(s) / Organization: DOE

Format: ☒ Document: 44 Total # Pages ☐ Transparencies / Presentations

☐ Photos: \_\_\_\_\_ # Prints ☐ Electronic Media: Type \_\_\_\_\_

Audience: ☐ Public Meeting ☐ Private Meeting ☐ Presentation to Congress

☐ Distribution List ☐ Internet Publication ☒ Publication/Press Release

Justification: DOE to put document on D&D RFP website

Requestor: Armanda Mayo X2ld69 Date: 6.20.08  
Legible Signature or Print Name & Signature

## II. Patent, Classification and Protected Information Review

(To be completed by the PORTS Classification Office)

Patent / Proprietary Review: ☒ Does not Contain Patentable or Proprietary information  
☐ Contains Patentable or Proprietary and/or has clearance patent information

Classification Review: ☒ Document is Unclassified  
☐ Document is Classified

Sensitive Information Review: ☐ Contains Official Use Only (OUO)  
☐ Contains Export Controlled (ECI)  
☐ Contains Unclassified Controlled Nuclear Information (UCNI)  
☐ Contains other Protected Information, describe: \_\_\_\_\_

## III. Information Release Approved or Denied

(To be completed by the PORTS Classification Officer)

☒ Approved for Public Meetings, Widespread Distribution, or Presentation to Congress

☒ Approved for Publication, Media Broadcast, and/or Public Website

☐ Approved for Internal Distribution Only

☐ Approved for Publication on the Internal Network only (access restricted to network users only)

☐ Not Approved for Release

☐ Approved with restrictions (describe): \_\_\_\_\_

MJUG/PORTS USEC C.O. 6/20/08 R H Thomas/6/20/08 DOE  
Classification Officer/Technical Information Officer Signature / Date

Send to OSTI? ☐ Yes ☒ No

Note: Requestor must retain a record copy of all requests (approved or rejected) and material being released

**EXHIBIT M**

**REGULATORY OVERSIGHT AGREEMENT**

**Revision 0**

REGULATORY OVERSIGHT AGREEMENT

between

UNITED STATES DEPARTMENT OF ENERGY

and

UNITED STATES ENRICHMENT CORPORATION

for the

GAS CENTRIFUGE ENRICHMENT PLANT LEASED PREMISES

THIS AGREEMENT, entered into as of this 19<sup>th</sup> day of December 2006, by and between the UNITED STATES OF AMERICA (hereinafter referred to as the "Government"), represented by the SECRETARY OF ENERGY (hereinafter referred to as the "Secretary"), the statutory head of the DEPARTMENT OF ENERGY (hereinafter referred to as "DOE"), and the UNITED STATES ENRICHMENT CORPORATION (hereinafter referred to as "USEC");

WITNESSETH THAT:

WHEREAS, USEC leases portions of the Portsmouth Gaseous Diffusion Plant ("PORTS") located at Piketon, Ohio and portions of the Paducah Gaseous Diffusion Plant ("PAD") located in Paducah, Kentucky from DOE pursuant to the Lease Agreement dated July 1, 1993 (the "GDP Lease");

WHEREAS, DOE and USEC Inc. have entered into a Agreement dated July 17, 2002, ("the DOE-USEC Agreement") to, inter alia, "[f]acilitate the deployment of new, cost-effective advanced enrichment technology in the U.S. on a rapid schedule;"

WHEREAS, the DOE-USEC Agreement establishes agreed upon milestones for the demonstration and deployment of advanced enrichment technology by USEC Inc.;

WHEREAS, in order to meet the DOE-USEC Agreement milestones, USEC has requested that the leasehold under the GDP Lease be expanded;

WHEREAS, DOE and USEC have entered into a modification of the GDP Lease for USEC's lease of the Gas Centrifuge Enrichment Plant ("GCEP Lease"), whereby USEC is leasing certain GCEP real property ("GCEP Leased Premises") at the PORTS site; and

WHEREAS, DOE is required to promote and protect the radiological health and safety of the public and workers and to provide for the common defense and security at DOE-owned facilities by exercising nuclear safety and safeguards and security oversight authority at the GCEP Leased Premises as defined in the GCEP Lease, unless the Nuclear Regulatory Commission ("NRC") has assumed regulatory responsibility such nuclear safety and safeguards and security requirements at the GCEP Leased Premises;

NOW, THEREFORE, DOE and USEC agree as follows:

#### ARTICLE I - DEFINITIONS

As used throughout this Agreement, including the appendices hereto, the following terms shall mean:

1. The term "As Found" means a condition where the as-built configuration of the plant or the as-implemented program, policy, or procedure does not agree with the Authorization Basis.
2. The term "Authorization Basis" means the documentation of programs, processes, and facility configuration upon which the Department of Energy (DOE) authorizes the safe and secure operation of an activity or facility in its facilities subject to DOE's regulatory oversight. The Authorization Basis is described in documents such as the facility Safety Analysis Report, Hazard Classification Documents, Technical Requirements, DOE-issued Safety Evaluation Reports, Security Plans, and the facility specific written commitments made in order to comply with DOE requirements under the GCEP Leased Premises Regulatory Oversight Agreement (GCEP ROA).
3. The term "CI" or "Classified Information" means Restricted Data and Formerly Restricted Data protected against unauthorized disclosure pursuant to the Act and National Security Information that has been determined pursuant to Executive Order 12958, as amended March 25, 2003, or any predecessor or successor executive order to require protection against unauthorized disclosure and that is marked to indicate its classified status when in documentary form.
4. The term "CI Civil Penalty" means a monetary penalty that may be imposed for a violation or violations relating to the security or safeguarding of Classified Information as established in 10 CFR Part 824.

5. The term "CI Notice of Violation" means a document setting forth the determination that one or more violations relating to the security or safeguarding of Classified Information have occurred.
6. The term "CI Violation" means a failure of the Corporation to meet any of the DOE requirements relating to the security or safeguarding of Classified Information incorporated into this Agreement. Each failure may be considered a separate occurrence of a violation, in addition the failure may be considered as a new violation each day that the same violation persists.
7. The term "Clear and Present Danger" means a condition or hazard that could be expected to cause: (a) either death or serious harm to plant workers or the public, or (b) serious damage to the common defense and security, immediately or before such condition or hazard could be eliminated through the normal enforcement mechanisms discussed in this Agreement.
8. The term "Corporation" means the United States Enrichment Corporation, its sublessee(s), its agents and representatives and its successors and assigns.
9. The term "Decreased Effectiveness Evaluation" means an evaluation to ensure that the proposed change does not decrease the effectiveness of the safeguards and security plans. The evaluation is conducted as prescribed in 10 CFR Part 70.32 or 10 CFR Part 76.68 as appropriate.
10. The term "DOE Functional Area Implementation Requirements" means the implementation requirements with respect to the nuclear safety, safeguards and security objectives as set forth in of Appendix A to this Agreement.
11. The term "DOE Inspector" means a DOE safety and health or safeguards and security professional supporting DOE Functional Areas Implementation Requirements oversight activities.
12. The term "DOE ORO Manager" means the Manager of DOE Oak Ridge Office or one or more DOE employee(s) whom that Manager has designated, in writing, to act for him in all, or a portion, of the matters addressed herein.
13. The term "DOE Regulatory Oversight Manager" means the DOE representative, or his designee, responsible for implementation of all facets of DOE regulatory oversight of the GCEP Leased Premises.

14. The term "GCEP Leased Premises" means the definition ascribed in the GCEP Lease.
15. The term "OPAE" means the Office of Price-Anderson Enforcement in DOE Headquarters.
16. The term "OPAE Civil Penalty" means a monetary penalty that may be imposed for a violation or violations for violation of 10 CFR Parts 830 and 835 requirements.
17. The term "OPAE Notice of Violation" means a document setting forth the determination of the DOE Office of Price-Anderson Enforcement that one or more violations of the 10 CFR Part 830 and 10 CFR Part 835 exemption requirements have occurred.
18. The term "OPAE Violation" means a failure of the Corporation to meet any of the 10 CFR Part 830 exemption requirements or the 10 CFR Part 835 exemption requirements incorporated into this Agreement. Each failure may be considered a separate occurrence of a violation, in addition the failure may be considered as a new violation each day that the same violation persists.
19. The term "ROA" means the Regulatory Oversight Agreement between the Department of Energy and the United States Enrichment Corporation for the GCEP Leased Premises.
20. The term "ROA Civil Penalty" means a monetary penalty that may be imposed for violation of DOE Functional Area Implementation Requirements.
21. The term "ROA Notice of Violation" means a document setting forth the determination DOE Regulatory Oversight Manager that one or more violations of the DOE ROA Functional Area Implementation Requirements have occurred.
22. The term "ROA Violation" means a failure of the Corporation to meet any of the Functional Area Implementation Requirements incorporated into this Agreement. Each failure may be considered a separate occurrence of a violation, in addition the failure may be considered as a new violation each day that the same violation persists.

23. The term "Safety Analysis" means a systematic analysis that identifies facility and external hazards and their potential for initiating accident sequences, the potential accident sequences, their likelihood and consequences, and any accident preventing or consequence mitigating features.
24. The term "Safety System" means those structures, systems, and components (SSCs) that are relied upon to prevent, control, or mitigate unacceptable consequences resulting from the hazards identified for a facility. SSCs are designated as "Safety Class" if they are necessary to keep hazardous exposures to the public below the offsite Evaluation Guidelines. SSCs are designated as "Safety Significant" if their functions are major contributors to defense in depth and/or worker safety, as determined from the Safety Analysis.
25. The term "Technical Requirements" means the technical specifications, operational requirements, and maintenance requirements for an item identified as "Safety Significant" are referred to in this GCEP ROA as Technical Requirements. Changes to Technical Requirements must be accomplished through a formal Change Control Process established by the lessee.
26. The term "Unreviewed Safety Question" means the determination that a proposed change is outside the bounds of previously DOE-approved Authorization Basis.
27. The term "Unreviewed Safety Question Evaluation" means the process by which changes to the facility, equipment within the facility, or processes within the facility must be reviewed to determine if there is an impact on safety for the activities subject to DOE regulatory oversight. Changes will undergo a formal Change Control Process, but if a change could have a negative impact on safety to activities subject to DOE regulatory oversight, an Unreviewed Safety Question (USQ) Evaluation will be conducted and documented to determine whether the change is within the approved Authorization Basis or outside of the Authorization Basis. Changes that do not affect the safety of activities undertaken under DOE regulatory oversight are not subject to review under the GCEP ROA. Such changes will be subject to the applicable NRC requirements.

All other capitalized terms shall have the meaning ascribed to them elsewhere in this Agreement or the appendices hereto, or the GCEP Lease.

## ARTICLE II - STATEMENT AND PURPOSE

The general purpose of this Regulatory Oversight Agreement ("Agreement" or "ROA") is to reflect the DOE determinations and requirements and the mutual commitments, understandings, and arrangements between the DOE and the Corporation concerning the regulatory oversight of the GCEP Leased Premises by DOE with respect to DOE Functional Area Implementation Requirements.

## ARTICLE III - TERM OF AGREEMENT

The term of this Agreement shall commence on December 19, 2006, and shall terminate upon termination, expiration, or relinquishment of the GCEP Lease Agreement, unless otherwise agreed to by the parties. It is acknowledged that certain facilities and activities may be regulated by the NRC at some point in the future. In the event the NRC assumes regulatory authority for some or all of the DOE Functional Area Implementation Requirements, a transition effort will be mutually agreed to among DOE and the NRC.

## ARTICLE IV - DOE OVERSIGHT/ENFORCEMENT AUTHORITY

1. DOE has determined that the DOE Functional Area Implementation Requirements set forth in Appendix A are reasonable and appropriate, and shall constitute the Nuclear Safety and Safeguards and Security Requirements applicable to the GCEP Leased Premises, and that compliance with these DOE Functional Area Implementation Requirements will enable the GCEP Leased Premises to continue to operate safely and protect the public health and safety and provide for the common defense and security.
2. DOE has determined that the program of Corporation self-assessments and DOE inspections, reviews, and other activities is reasonable and appropriate. DOE and the Corporation further agree that this Regulatory Oversight Program will constitute the mechanism by which DOE will exercise regulatory oversight and control over the GCEP Leased Premises with respect to nuclear safety, safeguards and security.



3. The Corporation agrees to ensure that the Corporation activities continue to comply with the Functional Area Implementation Requirements in Appendix A. The Corporation agrees to impose these commitments on any subcontractor/vendor/partner while performing activities in support of the American Centrifuge Plant performed pursuant to the Functional Area Implementation Requirements identified in Appendix A of this Agreement. The Corporation further agrees, as part of the Regulatory Oversight Program, to undertake the self-assessment activities delineated in the Functional Area Implementation Requirements, to cooperate with DOE in the inspections, reviews, and other activities conducted by DOE in accordance with the Regulatory Oversight Program; and to implement corrective or preventive actions as a result of these assessments, inspections, reviews, and other activities.
4. A. DOE has determined that DOE's Regulatory Oversight Program of the GCEP Leased Premises, including all of the self-assessments, inspections, reviews, and other activities described in the Regulatory Oversight Program, will be coordinated by the DOE Regulatory Oversight Manager. The DOE Regulatory Oversight Manager will have the authority to modify the Functional Area Implementation Requirements, including the authority to make additions or deletions to these requirements, if the DOE Regulatory Oversight Manager determines that the additional requirement is necessary to protect the public health and safety or to provide for the common defense and security, or the deleted requirement is no longer necessary to protect the public health and safety or to provide for the common defense and security in connection with the operation of the GCEP Leased Premises.
- B. The Corporation is authorized to add to, modify, or delete ("Change") any of the policies, procedures, practices and other implementation measures utilized to meet the Functional Area Implementation Requirements, provided (1) there will be no material diminution in the level of protection of the public health and safety or common defense and security as a result of such Change; (2) the Change does not involve an Unreviewed Safety Question or a Change in the Authorization Basis or an Operational Safety Requirement; (3) auditable records containing a summary of the Changes performed and retrievable evaluation packages required by the DOE requirements specified in the Functional Area Implementation Requirements are maintained; and (4) a summary of the Changes is provided to DOE annually for review.

- C. For proposed Changes which involve an Unreviewed Safety Question or a Change in the Authorization Basis or a Technical Requirement, the Corporation shall obtain DOE review and approval before implementing the proposed Change.
  - D. In reviewing the proposed modification of any specific Functional Area Implementation Requirements, the DOE Regulatory Oversight Manager will, whenever possible, attempt to facilitate the transition to compliance with the regulatory standards and requirements likely to be imposed on the GCEP Leased Premises by the NRC, if applicable.
5. The enforcement procedures available to DOE in the event that the Corporation fails to comply with the Functional Area Implementation Requirements are attached hereto, and incorporated by reference herein as Appendix B.

#### ARTICLE V - NOTICES

With the exception of Shutdown authority (as described in Appendix B of this Agreement) invoked by the DOE Regulatory Oversight Manager pursuant to Appendix B, no notice, Notice of Violation, answer, order, determination, requirement, consent, or approval under this Agreement shall be of any effect unless in writing. All notices and communications pursuant to this agreement required or desired to be given by DOE or the Corporation to either party shall be addressed to the Corporation or to the DOE and sent to the following addresses:

To DOE: Larry W. Clark  
Assistant Manager for Nuclear Fuel Supply  
U. S. Department of Energy  
Oak Ridge Operations  
P. O. Box 2001  
Oak Ridge, Tennessee 37831

To USEC: Victor N. Lopiano  
United States Enrichment Corporation  
Two Democracy Center  
6903 Rockledge Drive  
Bethesda, Maryland 20817

Either party may, by notice given as aforesaid, change its address for notices and communications to be given thereafter.

IN WITNESS WHEREOF, the parties hereto have executed this agreement as of the day and year first above written.

*Samuel Clark*

DEPARTMENT OF ENERGY

AND

*Victor N. Lopin*

UNITED STATES ENRICHMENT CORPORATION

Appendix A to Exhibit M  
Regulatory Oversight Agreement  
for the GCEP Leased Premises

December 19, 2006

## TABLE OF CONTENTS

### Terms and Definitions

- I. Introduction
- II. Functional Areas
  - 1.0 Organization Plan
    - 1.1 Objective
    - 1.2 Implementation Requirements
  - 2.0 Management Controls and Oversight
    - 2.1 Objective
    - 2.2 Implementation Requirements
  - 3.0 Operations
    - 3.1 Objective
    - 3.2 Implementation Requirements
  - 4.0 Engineering/Construction
    - 4.1 Objective
    - 4.2 Implementation Requirements
  - 5.0 Training and Qualification
    - 5.1 Objective
    - 5.2 Implementation Requirements
  - 6.0 Quality Assurance
    - 6.1 Objective
    - 6.2 Implementation Requirements
  - 7.0 Maintenance
    - 7.1 Objective
    - 7.2 Implementation Requirements
  - 8.0 Radiation Protection
    - 8.1 Objective
    - 8.2 Implementation Requirements
  - 9.0 Nuclear Criticality Safety
    - 9.1 Objective
    - 9.2 Implementation Requirements
  - 10.0 Fire Protection
    - 10.1 Objective
    - 10.2 Implementation Requirements
  - 11.0 Environmental Protection
    - 11.1 Objective
    - 11.2 Implementation Requirements
  - 12.0 Nuclear Material Safeguards
    - 12.1 Objective
    - 12.2 Implementation Requirements
  - 13.0 Emergency Preparedness
    - 13.1 Objective
    - 13.2 Implementation Requirements
  - 14.0 Waste Management

- 14.1 Objective
  - 14.2 Implementation Requirements
- 15.0 Safety Analysis
  - 15.1 Objective
  - 15.2 Implementation Requirements
- 16.0 Security
  - 16.1 Objective
  - 16.2 Implementation Requirements
- 17.0 Chemical Safety
  - 17.1 Objective
  - 17.2 Implementation Requirements
- 18.0 Packaging and Transportation
  - 18.1 Objective
  - 18.2 Implementation Requirements

## **I. INTRODUCTION**

The U. S. Department of Energy (DOE) will exercise regulatory oversight and enforcement pursuant to 10 CFR Part 820, 10 CFR Part 824, and this Regulatory Oversight Agreement (ROA) for activities undertaken by the Corporation in removing material and equipment from the Gas Centrifuge Enrichment Plant (GCEP) Leased Premises at the Portsmouth Gaseous Diffusion Plant (Portsmouth GDP) site in Piketon, Ohio. In addition, DOE will exercise regulatory oversight for the gas centrifuge activities of the Corporation not regulated by the U. S. Nuclear Regulatory Commission (NRC). The transition of regulatory responsibility from the DOE to NRC will be documented in a Memorandum of Understanding (MOU).

DOE will exercise its oversight authority both by contract (lease) and by DOE regulations. Under the requirements of this GCEP ROA, DOE will provide contractual requirements for health and safety and common defense and security. The enforcement process identified in Appendix B of this exhibit will apply to any ROA violations of the GCEP ROA contract (lease) requirements.

DOE regulations for nuclear safety management, including quality assurance, are found in 10 CFR Part 830 and "DOE Nuclear Safety Requirements" for worker radiation protection in 10 CFR Part 835. USEC requested and has been granted an exemption to the requirements of 10 CFR Parts 830 and 835. As such, the Corporation shall perform the gas centrifuge activities related to quality assurance and worker radiation protection, not under the regulation of NRC, in accordance with the conditions specified in the 10 CFR Part 830 and 10 CFR Part 835 Exemption Decisions dated February 2, 2004, as amended, and February 3, 2004, as amended, respectively and as established in this ROA. The enforcement procedures of 10 CFR Part 820, Appendix A and relevant OPAE Enforcement Guidance Supplements will apply to any potential violations related to the requirements of the 10 CFR Parts 830 and 835 exemptions. The enforcement process of 10 CFR Part 824 will apply to any potential violations related to Classified Information.

USEC has the responsibility for protection of health and safety and provision of adequate safeguards and security for all activities performed by USEC or its contractors in connection with the removal of equipment and material from the GCEP Leased Premises. NRC programs reviewed and approved in accordance with 10 CFR Part 76, contained in the Certification Application, satisfy the requirements of the GCEP ROA for protection of health and safety. USEC Inc. has responsibility for protection of health and safety and provision of adequate safeguards and security for all activities performed by USEC Inc., or its contractors in connection with any refurbishment/construction for the Lead Cascade and pre-construction activities in the subleased GCEP facilities and the installation of equipment for the American Centrifuge Plant ("ACP"). DOE will have regulatory oversight of health, safety and safeguards and security at the GCEP Leased Premises and/or activity, unless the NRC assumes regulation. DOE regulatory oversight of the GCEP includes serving as the cognizant security agency for USEC Inc.'s subcontractor/vendor/partner facilities performing work related to the American Centrifuge Program.

Unless NRC assumes regulation of the GCEP Leased Premises and/or activity, the DOE Regulatory Oversight Manager will oversee regulation of the gas centrifuge facilities for

those applicable requirements of this ROA. The DOE OPAE will conduct any investigations of potential regulatory violations of the 10 CFR Parts 830 and 835 exemption requirements. OPAE will, if applicable, issue enforcement actions in accordance with OPAE's statutory authority, policies, and processes. The DOE Regulatory Oversight Manager will work with and provide support in the implementation of OPAE's enforcement program.

USEC Inc. will be developing programs and documentation as required by the License Application during the time that the equipment removal, refurbishment/construction of the Lead Cascade, and any pre-construction activities are occurring in preparation for the construction and operation of the ACP. These will be used by USEC Inc., to meet the requirements of 10 CFR Part 70 and the License Application. These satisfy the requirements of the GCEP ROA for protection of health and safety, with the exception of safeguards and security. A transition from DOE to NRC regulation will occur prior to the commencement of construction of the ACP, unless specific activities in specific facilities warrant remaining under DOE regulatory oversight for an additional period of time. In this case, the facility would transition to NRC regulation on a mutually agreed to schedule.

In preparing the GCEP Leased Premises for deployment of the gas centrifuge technology prior to NRC regulation, DOE will regulate these activities pursuant to this GCEP ROA. This document defines the set of safety and safeguards and security requirements which will protect public and worker health and safety and assure adequate safeguards and security for the activities to be undertaken by the Corporation that are subject to DOE regulatory oversight at the GCEP Premises leased by DOE to the Corporation in support of deployment of the centrifuge technology at the GCEP Leased Premises. These requirements and the implementation of these requirements form the basis of DOE regulatory oversight and will result in safe activities in the GCEP Leased Premises. As appropriate, the source document for the objective and/or the implementation requirement has been provided. Only the objective and/or the implementation requirement included from the source document is a requirement of the GCEP ROA.

## **II. FUNCTIONAL AREAS**

This section describes the envelope of operating requirements that are required and considered necessary to protect the health and safety of the public and facility workers and safeguards and security. Reviews by DOE subject matter experts have confirmed that implementation of these requirements will contribute to the safety of activities in support of the GCEP Leased Premises. The safety and safeguards and security requirements have been defined for eighteen topical areas. The objective of each of the eighteen topical areas is provided followed by a set of Implementation Requirements defining actions necessary to satisfy the objective.



## **1.0 ORGANIZATION PLAN**

### **1.1 Objective**

Activities conducted in the GCEP Leased Premises shall be organized in a manner to ensure that responsibility and authority for safe operations are clearly defined, and that requisite safety functions are independent of equipment removal and installation activities.

### **1.2 Implementation Requirements**

1.2.1 Activities conducted in the GCEP Leased Premises shall have current plans, procedures or other appropriate documentation, which clearly define authority, responsibility, and accountability for safe operations. The current plans, procedures, or appropriate documentation shall contain the following elements:

1.2.1.1 Authority for safety clearly defined for each position of responsibility.

1.2.1.2 Responsibility for safety clearly delineated in each position description and in each "roles and responsibility" document.

1.2.1.3 Programs and procedures will be established for the following functions (if applicable to the activities subject to DOE regulatory oversight):

- 1.2.1.3.1 nuclear safety design
- 1.2.1.3.2 nuclear criticality safety
- 1.2.1.3.3 fire protection
- 1.2.1.3.4 natural phenomena hazards mitigation
- 1.2.1.3.5 safeguards and security
- 1.2.1.3.6 personnel selection and training program
- 1.2.1.3.7 quality assurance
- 1.2.1.3.8 radiation protection
- 1.2.1.3.9 preparation of safety documentation

1.2.2 Quality assurance, radiation protection, and preparation of safety documentation (e.g., safety evaluations) activities shall be independent of equipment removal, installation, and refurbishment activities.

1.2.3 All personnel shall have the authority to halt unsafe activities.

## **2.0 MANAGEMENT CONTROLS AND OVERSIGHT**

### **2.1 Objective**

Management Controls and Oversight of activities subject to DOE regulatory oversight which could have a negative impact on nuclear safety, occupational safety, or safeguards and security shall be conducted in an appropriately controlled manner that ensures the protection of the workers, the public, the environment, and national security interests.

### **2.2 Implementation Requirements**

- 2.2.1 Procedures and documents important to Safety and Health and Safeguards and Security shall be developed, revised, reviewed, approved, distributed, and implemented in accordance with identified, written requirements and authorizations.
- 2.2.2 An internal and independent safety review process shall be established and maintained.
- 2.2.3 Occurrences shall be reported and investigations conducted on events that could affect the health and safety of the public or endanger the health and safety of workers.
- 2.2.4 A commitment tracking system shall be maintained to monitor the status of formal commitments to improve safety and safeguards and security.
- 2.2.5 Administrative controls shall provide standard methods and requirements for creating, collecting, maintaining, and disposing of records related to nuclear safety and safeguards and security.
- 2.2.6 Management shall develop and implement a formal, organized process whereby people plan, perform, assess, and improve the safe conduct of work.

## **3.0 OPERATIONS**

### **3.1 Objective**

Management shall ensure that activities in the GCEP Leased Premises are performed within the controls developed through the use of hazard analysis and safety reviews.

### **3.2 Implementation Requirements**

- 3.2.1 Material possession limits and operating bounds for safety systems as

established by the Authorization Basis documents shall be observed.

- 3.2.2 Surveillance requirements, as established in the Authorization Basis, shall be conducted as specified. Additional tests to verify proper operation of systems and integrity of confinement structures shall be conducted after significant maintenance/modifications as specified in any post-maintenance/modification testing procedures.
- 3.2.3 Procedures or work instructions shall be prepared to facilitate initial and periodic tests of safety features and/or systems to ensure it operates and meets design objectives.
- 3.2.4 Prior to or during any type of activity, management shall assess equipment and personnel performance through a program of monitoring and facility walk downs.
- 3.2.5 Turnovers conducted for selected shift stations shall ensure the effective and accurate transfer of information between shift personnel.
- 3.2.6 Management shall ensure that proposed changes to facilities and activities subject to DOE regulatory oversight outside the approved Authorization Basis are not implemented without the prior approval of DOE. Proposed changes which may affect the operation of the Lead Cascade or ACP will be subject to NRC requirements.
- 3.2.7 Management shall ensure that "As Found" conditions outside the approved Authorization Basis are reported to DOE. Appropriate engineering reviews and safety assessments will be performed and submitted to DOE for review and approval. "As Found" conditions outside of the Authorization Basis for operation of the GCEP Leased Premises under the NRC license will be addressed in accordance with NRC requirements.

#### **4.0 ENGINEERING/CONSTRUCTION**

##### **4.1 Objective**

There shall be a documented, graded approach to the review process to ensure that: all facility and procedure changes are reviewed to confirm that adequate safety and safeguards and security are maintained; unreviewed safety questions are identified; appropriate performance requirements are included in procurement specifications for safety system components; and that appropriate personnel safety measures are in place for the equipment removal or installation activities subject to DOE regulatory oversight.

## **4.2 Implementation Requirements**

- 4.2.1 Procedures and controls shall be established under a graded approach to ensure appropriate reviews of the following:
  - 4.2.1.1 Each change to procedures or equipment design impacting safety systems to ensure the adequacy of configuration control, radiation protection, criticality systems, safety and health, and safeguards and security considerations and to maintain appropriate limits.
  - 4.2.1.2 Each procurement document for safety systems to ensure that it contains appropriate information on established radiological safety requirements and to ensure that vendors shall supply equipment that will perform under expected service conditions.
  - 4.2.1.3 Reviews will be done for those activities, which have the potential to impact worker safety.
  - 4.2.1.4 Listings of all changes to facility and equipment safety systems evaluated using engineering reviews and safety assessments and the configuration change control process shall be maintained for each calendar year. Appropriate documentation shall be made available for DOE regulatory review in a timely manner, if requested
- 4.2.2 Controls for radiation protection shall implement physical design features to minimize radiological exposure to As Low As Reasonably Achievable (ALARA).
- 4.2.3 Engineering reviews of proposed changes to activities subject to DOE regulatory oversight which involve an unreviewed safety question are submitted to DOE in a timely manner for review and approval prior to implementation.

## **5.0 TRAINING AND QUALIFICATION**

### **5.1 Objective**

Personnel must be aware of and trained to recognize and address safety and health hazards and safeguards and security requirements that they will encounter in their jobs, and they must be appropriately trained and qualified for the functions they perform.

### **5.2 Implementing Requirements**

- 5.2.1 Each Corporation manager shall define the required training needs and

assure completion of training of their subordinates consistent with their job.

- 5.2.2 Corporation personnel and visitors or contractors shall successfully complete General Employee Training (GET) and any specific training in the areas listed below before they are granted unescorted access to controlled areas.

- 5.2.2.1 Radiological, criticality, chemical and industrial safety hazards and rules;

- 5.2.2.2 Emergency Preparedness; and

- 5.2.2.3 Safeguards and security.

- 5.2.3 Corporation personnel shall successfully complete radiation protection training before they are granted unescorted access to radiological areas.

- 5.2.4 Corporation personnel shall successfully complete applicable training for the safety aspects associated with the activities to be performed.

- 5.2.5 Corporation personnel shall successfully complete safeguards and security training, retraining and re-qualification at established intervals.

- 5.2.6 Training requirements shall be defined and listed on the applicable Training Requirements Matrices (TRMs). Training shall be provided to supervisors and managers with respect to their responsibilities in the areas of safety, health and safeguards and security.

- 5.2.7 Selection and qualification of quality assurance personnel involved in inspection, tests, independent assessments, and audits shall meet the requirements specified in the Quality Assurance Program (QAP).

## **6.0 QUALITY ASSURANCE**

### **6.1 Objective**

A Quality Assurance Program (QAP) shall be established to ensure that planned and systematic actions subject to DOE regulatory oversight will provide adequate confidence that safety and health and safeguards and security related structures, systems, and components meet requirements and will perform satisfactorily in service.

The Corporation shall perform activities within the GCEP Leased Premises in accordance with the conditions specified in the 10 CFR Part 830 Exemption Decision dated February 2, 2004, as amended, for activities covered by the GCEP ROA. Failure to comply with the conditions specified in the Exemption Decision would be an OPAE

violation of DOE Nuclear Safety Requirements enforceable under 10 CFR Part 820. Enforcement of 10 CFR Part 820 enforcement actions is the responsibility of OPAE and may include OPAE civil penalties.

## **7.0 MAINTENANCE**

### **7.1 Objective**

Maintenance shall include effective programs for preventive maintenance, corrective maintenance, and calibration of instruments.

### **7.2 Implementation Requirements**

- 7.2.1 A graded corrective and preventive maintenance program shall be implemented to ensure that timely maintenance is performed on safety systems and safeguards and security equipment.
- 7.2.2 A graded instrument calibration program, employing standards traceable to the national standards system or to nationally accepted standards, shall be implemented for the calibration of equipment and monitoring devices necessary for the proper maintenance and operation of safety systems and safeguards equipment.

## **8.0 RADIATION PROTECTION**

### **8.1 Objective**

The radiation exposure of employees, contractors, and visitors and the release of radioactive effluents to unrestricted areas shall be maintained ALARA with economic and societal factors being taken into account.

The Corporation shall perform activities within the GCEP Leased Premises in accordance with the conditions specified in the 10 CFR Part 835 Exemption Decision dated February 3, 2004, as modified by letter dated August 13, 2004, for activities covered by the GCEP ROA. Failure to comply with the conditions specified in the Exemption Decision would be an OPAE violation of DOE Nuclear Safety Requirements enforceable under 10 CFR Part 820. Enforcement of 10 CFR Part 820 enforcement actions is the responsibility of OPAE and may include OPAE civil penalties.

This GCEP ROA also provides for contract enforcement by various actions and penalties, including contractual requirements for health and safety and common defense and security. In addition to operating in accordance with the conditions in the 10 CFR Part 835 exemptions, the following requirements are included as part of this GCEP ROA:

## **8.2 Implementation Requirements**

- 8.2.1 A radiation control program that defines steps to be taken to limit exposure of workers and the public shall be established.
- 8.2.2 Line management shall ensure that radiological activities are conducted in accordance with radiation protection instructions and procedures.
- 8.2.3 Radiation protection personnel, independent of organizations responsible for equipment removal or installation, shall be provided to guide and assist line managers in fulfilling their radiation protection responsibilities.
- 8.2.4 A radiation protection manager shall be provided to advise and consult with line managers and to guide the radiation protection activities.
- 8.2.5 Instructions concerning all the activities of radiation protection technicians shall be provided. Radiation protection procedures for the control and use of radioactive materials and radiation- generating devices shall provide for safe operations.
- 8.2.6 A formally structured, auditable ALARA program with established milestones to ensure that exposures are maintained at ALARA levels shall be in place.
- 8.2.7 A respiratory protection program to limit the intake of airborne radioactive materials and to protect employees from potentially hazardous atmospheres shall be established.
- 8.2.8 A bioassay system shall be established that will evaluate Committed Effective Dose Equivalents (CEDE) to personnel who are occupationally exposed to radiation with the likelihood to receive an exposure of 100 mrem or greater.
- 8.2.9 Engineering and administrative controls and personal protective equipment shall be used to control the exposure of employees to internal radiation sources; occupational exposures shall be evaluated and recorded when the potential exposure could exceed 2% of the regulatory limit in a year.
- 8.2.10 Employee exposure to external radiation sources shall be controlled using postings, interlock systems, monitoring, shielding, and surveys.

Occupational exposures shall be evaluated and recorded when the potential exposure could exceed 2% of the annual limit for effective dose equivalent in a year. Exposure of extremities and the skin shall be evaluated as appropriate.

8.2.11 Radiation areas, high radiation areas, very high radiation areas, contamination areas, high contamination areas, airborne radioactivity areas, and radioactive materials (storage) areas shall be prominently and distinctly marked to preclude inadvertent or unknowing entry by employees, visitors, and contractors.

8.2.12 Plant alarms to alert personnel in and around facilities of emergency conditions or impending hazards shall be provided.

8.2.13 The radiation monitoring and contamination control program shall ensure worker protection from radiation exposures. Sources of radioactive contamination shall be controlled at the source and steps shall be taken to limit the extent of contamination. The extent of contaminated areas shall be limited by vigorous decontamination efforts.

8.2.14 Airborne radioactive materials, surface contamination, and external radiation exposures shall be monitored and surveyed to assure that employee internal accumulations of radioactive materials can be routinely estimated and to ensure that exposures are at ALARA levels.

8.2.15 Personnel dosimetry shall be used and maintained so that results will be accurately determined.

8.2.16 A formal inventory program to account for nonexempt by-product material sources and to provide for their control, movement, and leak testing shall be maintained.

8.2.17 Provisions shall be made to provide for oversight of radiation protection programs. The audit program for both routine operations and unusual radiological occurrences shall provide for adequate assessment of performance.

8.2.18 A Radiation Work Permit (RWP) system to ensure that radiation exposure and contamination controls are applied to all activities involving entry into radiation, airborne radioactivity, and contamination areas and to other work areas with radioactive materials, shall be established.



- 8.2.19 Radiation protection instructions to workers such as RWPs shall be available for review at the entry of the work area to which they apply.
- 8.2.20 Radiation measuring instruments used to evaluate hazards or define employee exposure shall be subject to periodically scheduled maintenance and calibration in accordance with approved procedures; the sources of radiation used to calibrate these instruments will be National Institute of Standards and Technology (NIST) traceable.
- 8.2.21 Employees shall be provided with an annual report of their occupational exposure history and visitors shall be provided with information with respect to their exposure. Summary exposure information shall be reported annually.
- 8.2.22 Records related to occupational radiation exposure shall be maintained in a manner that permits easy recovery of the data, allows for trend analysis, and aids in the protection of the individual and the control of radiation exposure.
- 8.2.23 In addition to radiological protection, an occupational health program shall be established to oversee, promote, and protect the radiological and non-radiological health of plant personnel.

## **9.0 NUCLEAR CRITICALITY SAFETY**

### **9.1 Objective**

The GCEP facilities while under DOE regulation will be categorized as a Radiological Facility. As such 10 CFR 830 Subpart B will not apply. However, should the categorization of the GCEP facilities change to Category 3 or higher then the requirements of 10 CFR 830 Subpart B and DOE O 420.1A, "Facility Safety", Section 4.3 (except 4.3.2.j) will be applicable and the following requirements for Nuclear Criticality Safety will apply. The regulatory oversight for the design and operational integrity of the GCEP NCS system to be used upon transition of GCEP regulation to NRC is the responsibility of the NRC.

A Nuclear Criticality Safety (NCS) Program shall provide the necessary elements to protect personnel from potentially dangerous effects of a nuclear criticality accident. This goal shall be accomplished by Nuclear Criticality Safety Evaluations/Analyses (NCSEs/As) and implementation of any administrative and engineered process controls identified in accordance with the NCS Program.

## **9.2 Implementation Requirements**

9.2.1 The GCEP Leased Facilities have been previously used for enrichment processing with centrifuge machines. Residual contamination of process equipment is present that could have NCS Implications, where enrichment exceeded 1 percent  $U^{235}$ . Therefore, a two-part approach is required to be implemented. First, NCSEs/As and controls (if any) must be maintained during the equipment removal phase to ensure that possible criticality contingencies are controlled. Second, the activities subject to DOE regulatory oversight must be evaluated through an NCS program to provide engineering and administrative controls to demonstrate the safety of the proposed activities. The requirements are:

9.2.1.1 Develop an NCS Program that ensures activities with fissionable material remain sub-critical under all normal and credible abnormal conditions.

9.2.1.2 NCSEs/As shall be performed and/or maintained consistent with the requirements of the NCS Program.

9.2.1.3 Nuclear Critical Accident Alarm System meeting the requirements of ANS 8.3 shall be provided if required by the NCS Program for coverage of areas involving credible criticality accidents.

9.2.1.4 Technical Requirements or equivalent (if required) shall specify actions to be taken in the event of an inoperable Nuclear Criticality Accident Alarm System.

## **10.0 FIRE PROTECTION**

### **10.1 Basic Objective**

The Fire Protection Program shall ensure that no undue threats to the public or employees will result from fire and resultant perils.

The fire protection program will comply with the following standards for modifications to the GCEP Leased Premises that affects the fire protection system: DOE O 420.1A, Section 4.2, Fire Protection, NFPA 10-1990, Portable Fire Extinguishers, NFPA 13-1989, Standard for the Installation of Sprinkler Systems; NFPA 15-1990, Water Spray Systems; NFPA 24-1992, Private Fire Service Mains; and NFPA 30-1990, Flammable Liquids. Any deviations found during future modifications will be documented and justified by the Authority Having Jurisdiction (AHJ) or corrective action will be taken.

10.1.1 The fire protection program shall have the following features:

- 10.1.1.1 A policy statement that incorporates the requirements of this section, related DOE directives, and other applicable Federal, state, and local fire protection requirements. The statement shall affirm management's commitment to support a level of fire protection and fire suppression capability sufficient to minimize losses from fire and related hazards consistent with the best class of protected property in private industry.
- 10.1.1.2 Comprehensive, written fire protection criteria that reflect additional site-specific aspects of the fire protection program, including the organization, training, and responsibilities of the fire protection staff, administrative aspects of the fire protection program, and requirements for the design, installation, operability, inspection, maintenance, and testing of fire protection systems.
- 10.1.1.3 Written fire safety procedures governing the use and storage of combustible, flammable, radioactive, and hazardous materials so as to minimize the risk from fire. Such procedures shall also exist for fire protection system impairments and for activities such as smoking, hot work, safe operation of process equipment, and other fire prevention measures which contribute to the decrease in fire risk.
- 10.1.1.4 A system to ensure that the requirements of the DOE fire protection program are documented and incorporated in the plans and specifications for all new facilities and for significant modifications of existing facilities. This includes a documented review by a qualified fire protection engineer of plans, specifications, procedures, and acceptance test.
- 10.1.1.5 Fire hazard analyses (FHAs) or equivalent<sup>1</sup> shall be developed for all nuclear facilities, significant new facilities, and facilities that represent unique or significant fire safety risks. The FHA shall be developed using a graded approach. The conclusions of the FHA shall be incorporated in the Facility Accident Analysis and shall be integrated into design basis and beyond design basis accident conditions.
- 10.1.1.6 Access to a qualified and trained fire protection staff, including a fire protection engineer(s), technicians, and fire

---

<sup>1</sup> "or equivalent" will require a submittal of documentation of equivalency by USEC and approval by DOE.

fighting personnel to implement the fire protection requirements.

- 10.1.1.7 A "baseline" needs assessment or equivalent<sup>2</sup> that establishes the minimum required capabilities of site fire fighting forces. This includes minimum staffing, apparatus, facilities, equipment, training, fire pre-plans, off-site assistance requirements, and procedures. Information from this assessment shall be incorporated into the site Emergency Plan.
- 10.1.1.8 Written pre-fire strategies, plans, and standard operating procedures to enhance the effectiveness of site fire fighting forces, where provided. Such procedures shall include those governing the use of fire fighting water or other neutron moderating materials to suppress fire within or adjacent to moderation controlled areas. Restrictions on the use of water shall be fully justified on the basis of criticality safety.
- 10.1.1.9 A comprehensive, documented fire protection self-assessment program, which includes all aspects (program and facility) of the fire protection program. Assessments shall be performed on a regular basis at an established frequency.
- 10.1.1.10 A program to identify, prioritize, and monitor the status of fire protection-related appraisal findings/recommendations until final resolution is achieved. When final resolution will be significantly delayed, appropriate interim compensatory measures shall be implemented to minimize the fire risk.
- 10.1.1.11 A process for reviewing and recommending approval of fire safety "equivalencies" and "exemptions" to the AHJ for fire safety.

## **10.2 Implementation Requirements**

- 10.2.1 The Fire Protection Program shall be under the direction of an individual who has been assigned as AHJ commensurate with the responsibilities of the position.
- 10.2.2 Fixed fire suppression systems, where provided, shall be tested and maintained such that fires in those areas are controlled promptly.

---

<sup>2</sup> "or equivalent" will require a submittal of documentation of equivalency by USEC and approval by DOE

- 10.2.3 Automatic fire suppression systems shall be provided for areas containing safety systems and for all areas subject to significant life safety hazards.
- 10.2.4 A reliable water supply, with sectional isolation valves shall be maintained.
- 10.2.5 Closing of valves supplying fire suppression systems shall be controlled by a written permit system.
- 10.2.6 A fire department shall be maintained as an acceptable means of redundant fire protection.
- 10.2.7 Fire Department personnel shall be available at all times and shall be trained and equipped to handle anticipated types of fires and other emergencies.
- 10.2.8 Mobile fire apparatus that is required to support fire-fighting operations shall be provided and maintained.
- 10.2.9 Breathing air used in fire fighting shall meet a minimum quality of Grade D.
- 10.2.10 On-site fire protection support shall be available to evaluate the fire hazards of changes to maintenance and process systems.
- 10.2.11 A fire protection review of design documents for new facilities and for modifications to existing facilities shall be made to insure that fire protection issues have been properly addressed.
- 10.2.12 Fire protection appraisals of important buildings shall be conducted periodically to identify changes that adversely impact existing fire protection levels. Means of emergency egress shall be regularly inspected for all areas that are normally occupied. Personnel who are trained and knowledgeable in detecting fire hazards shall conduct periodic inspections of all important buildings and other structures.
- 10.2.13 All fires shall be investigated and root causes determined.
- 10.2.14 Portable fire extinguishers shall be available throughout the plant commensurate with the hazard.
- 10.2.15 A fire alarm system that reports to a continuously manned location shall monitor fire alarms in all important buildings and structures.
- 10.2.16 Welding/burning/hot work shall be controlled by a written permit system to minimize the fire hazards of open flame equipment.
- 10.2.17 Emergency medical services shall be provided to assure proper

emergency care of injured employees.

10.2.18 Noncombustible or fire-resistive construction shall be utilized, where appropriate. Also, complete fire-rated barriers that are commensurate with the fire hazard to isolate hazardous occupancies and to minimize spread shall be utilized, as required.

10.2.19 A means to notify and evacuate building occupants in the event of a fire, such as a fire detection or fire alarm system and illuminated, protected egress paths shall be provided.

10.2.20 Physical access and appropriate equipment to facilitate effective intervention by the fire department, such as an interior standpipe system(s) in multi-story or large facilities with complex configurations, shall be provided.

10.2.21 A means to prevent the accidental release of significant quantities of contaminated products of combustion and fire fighting water to the environment, such as ventilation control and filter systems and curbs and dikes, or equivalent<sup>3</sup> shall be provided. Such features would only be necessary if required by the FHA or safety analysis in conjunction with other facility or site environmental protection measures.

10.2.22 Fire and related hazards that are unique to GCEP and are not addressed by industry codes and standards shall be protected by isolation, segregation, or use of special fire control systems, such as inert gas or explosion suppression, as determined by the FHA, shall be provided.

10.2.23 Fire protection systems shall be designed such that their inadvertent operation, inactivation, or failure of structural stability will not result in the loss of vital safety functions or inoperability of safety class systems as determined by the safety analysis.

## **11.0 ENVIRONMENTAL PROTECTION**

### **11.1 Objective**

The Corporation will perform activities in the GCEP Leased Premises in a manner such that the release of potential environmental hazards to the air, ground and water comply with applicable regulatory and permit requirements and is consistent with the radiation protection program objective of limiting radioactive releases to the environment, as low as reasonably achievable (ALARA).

---

<sup>3</sup> "or equivalent" will require a submittal of documentation of equivalency by USEC and approval by DOE.

## **11.2 Implementation Requirements**

Provisions shall be implemented as follows to prevent, monitor, mitigate and report environmental releases impacting the public and the environment.

- 11.2.1 A mitigation/spill prevention, control and countermeasures program shall be maintained to prevent releases to the environment.
- 11.2.2 Environmental monitoring shall be implemented if required by applicable regulations or permits. The monitoring will determine the effects, weather impacts, and personnel exposure and collect required sampling and analysis data relative to releases to the environment of hazardous effluents.
- 11.2.3 Monitoring data, including data, for emergency reporting where regulatory limits are exceeded will be collected and reported as required under applicable regulations and permits.

## **12.0 NUCLEAR MATERIAL SAFEGUARDS**

### **12.1 Objective**

A documented program shall be implemented to protect nuclear material (NM) from unauthorized removal; to prevent unlicensed enrichment of nuclear material to special nuclear material; to control and account for NM using standard methods; and to protect NM facilities against radiological sabotage. This program shall provide the level of protection mandated by DOE Orders. The Orders shall apply only to the extent of the security interest present at the facility. Hazards and hazard mitigation are not covered by Nuclear Materials Safeguards.

### **12.2 Implementation Requirements**

- 12.2.1 Written plans and procedures that identify the strategies, mechanisms, and commitments to protect NM from unauthorized removal, to account for NM, to prevent unlicensed enrichment of nuclear material to special nuclear material; and to protect NM facilities against radiological sabotage.
- 12.2.2 A system for tracking, accounting for, and reporting to the Nuclear Materials Management System and Safeguards (NMMSS), all reportable quantities of nuclear material.
- 12.2.3 A measurement control program, providing for the degree of measurement control for ensuring that equipment used to measure nuclear materials is properly calibrated using standards traceable to national standards and for supporting the estimation of the contribution of measurement certainty to inventory difference.

- 12.2.4 If applicable, physical barriers, vaults, intrusion detection systems, and access controls designed to protect NM from access by unauthorized personnel or from unauthorized removal.
- 12.2.5 A system of independent audits and assessments to verify the effectiveness of the elements of the Nuclear Material Control & Accountability (NMC&A) program, including measurement controls, material controls, and accounting systems.
- 12.2.6 A system of performance testing to verify the effectiveness of the nuclear materials protection program, as required.
- 12.2.7 Written Plans and procedures to ensure implementation of Voluntary agreements and the Additional Protocol between the United States of America and the International Atomic Energy Agency while protecting site safeguards and security interests.

### **13.0 EMERGENCY PREPAREDNESS**

#### **13.1 Objective**

In order to ensure the protection of the workers, public, and the environment, in the event of an emergency involving activities in these facilities, the lessee must develop, implement, and maintain their Emergency Management Program commensurate with their identified hazards.

#### **13.2 Implementation Requirements**

- 13.2.1 An individual shall be designated responsibility for implementation of the Emergency Management Program at PORTS as it pertains to the Corporation Lead Cascade/ACP and clean-up activities. Responsibilities of any project individuals supporting the PORTS Emergency Preparedness Program shall be clearly defined.
- 13.2.2 A hazards assessment shall be developed and maintained for use in emergency planning. This assessment shall consider the broad spectrum of events that could affect the facilities and be used in the development of the Emergency Management Plan.
- 13.2.3 An Emergency Management Plan shall be developed and maintained as a controlled document. The Emergency Management Plan and its associated support documents shall be reviewed annually and updated as necessary.
- 13.2.4 In coordination with the DOE site personnel, provisions shall be made for



recovery from an emergency in the GCEP Leased Premises and re-entry into the buildings. These provisions shall include specific procedures for termination of an emergency, dissemination of information, establishment of a recovery team, and criteria for resumption of activities in support of the Lead Cascade/ACP.

13.2.5 In coordination with the DOE site personnel, training for any project emergency response individuals on their duties in the emergency response plan shall be identified and maintained on an established schedule.

13.2.6 Project emergency response individuals shall participate in site emergency response exercises, as requested.

## **14.0 WASTE MANAGEMENT**

### **14.1 Objective**

Management of waste shall be conducted in accordance with applicable Federal, state, and local laws and regulations. The management of hazardous, radioactive, and mixed waste shall be conducted in manner to ensure that the radioactive releases, should they occur, are below regulatory limits and ALARA.

### **14.2 Implementation Requirements**

The regulatory requirements for mixed wastes (i.e., hazardous/radioactive) are addressed in environmental law as well as under the Atomic Energy Act of 1954, as amended. The requirements under environmental law are codified in the Code of Federal Regulations of Title 40 Parts 260 through 273 in accordance with Subtitle C of the Resource Conservation and Recovery Act (RCRA) and in Ohio hazardous waste regulations. The radioactive components for these and for all low-level radioactive wastes as well as hazardous and mixed waste are subject to the following implementing requirements:

14.2.1 The safety and health of the public shall be protected by managing activities in support of the Lead Cascade/ACP, clean-up, and related operations in a manner that provides for the safe handling, transportation, and storage of hazardous, radioactive, or mixed wastes generated. This is accomplished by managing hazardous, radioactive, or mixed wastes according to the requirements of the Atomic Energy Act (AEA) and applicable state requirements.

14.2.2 A Waste Minimization Program shall be implemented to segregate, substitute, and minimize the amount of waste requiring disposal.

- 14.2.3 All hazardous, radioactive, and mixed wastes shall be characterized with sufficient accuracy to permit segregation, handling, and transfer to treatment, storage, or disposal facilities (TSD). Additional characterization needed to ensure the actual physical and radiological characteristics meet the waste acceptance criteria (WAC) of an off-site TSD facility shall be performed prior to shipment to an offsite TSD facility.
- 14.2.4 An operating record-keeping system shall be developed and maintained to document the following: (1) a historical record of waste generated, treated, stored, shipped, and/or disposed of; (2) data necessary to show that the waste was properly classified, treated, stored, shipped, and/or disposed of; and (3) waste manifests.
- 14.2.5 A program will be in place to inspect off-site treatment storage and disposal facilities and practices.

## **15.0 SAFETY ANALYSIS**

### **15.1 Objective**

A thorough safety analysis of all activities subject to DOE regulatory oversight shall be conducted to assure that hazards have been identified and that appropriate limits and controls are identified to provide for safe activities under potential accident conditions providing assurance of no undue risk to the public, protecting the environment, and providing a safe work place for personnel.

### **15.2 Implementation Requirements**

- 15.2.1 Determine the facility preliminary classification by maximum quantity of nuclear material included in the design.
- 15.2.2 Perform hazards evaluation, accident analysis, and determine controls and document. The design must provide for adequate protection against natural phenomena with consideration of the most severe documented historical events for the site. (10 CFR 70.64)
- 15.2.3 Establish an unreviewed safety question evaluation process or equivalent to prevent inadvertent change to documented safety analysis or any of its basis or conclusions.
- 15.2.4 Document controls from the safety analysis in technical safety requirements or equivalent.

- 15.2.5 Conduct activities consistent with procedures and /or work instructions, as required by the Quality Assurance Program.

## **16.0 SECURITY**

### **16.1 Objective**

Security plans shall be developed and implemented to protect national security interests other than nuclear material (NM), including classified information and material and sensitive unclassified information and material (e.g., Export Controlled Information) at the Corporation facilities covered by this agreement. The DOE Orders, Manuals and Guides shall apply only to the extent of the security interest present at the facility. Hazards and hazard mitigation are not covered by Security. Specific safeguards and security measures are documented in approved plans as appropriate.

### **16.2 Implementation Requirements**

- 16.2.1 Measures to ensure effective management and implementation of the security plans shall be developed and implemented. These include:

- 16.2.1.1 Documented security plans: DOE O 470.4, and DOE M470.4-2, Chg 1.
- 16.2.1.2 Utilization of a protective force as appropriate, the armed, uniformed members of which are trained and qualified under a DOE certified program: DOE/USEC Arming and Arrest Authority Security Plan, as amended.
- 16.2.1.3 Conformance to measures to control the issuance and use of security badges, credentials, and shields: DOE O 470.4-2, Chg 1.
- 16.2.1.4 Program of security systems performance testing: DOE O 470.4 and DOE O 473.2. Program for the inquiry and reporting to DOE of incidents of security concern: DOE O 470.4.
- 16.2.1.5 Changes to the GCEP leased premises/equipment that could directly/indirectly affect Safeguards and Security shall require a Decreased Effectiveness Evaluation (DEE) of the affected security plan(s). Safeguards and security plan changes shall be evaluated to ensure that the personnel safety is unaffected.

16.2.2 Documented measures to protect classified information and materials from loss or unauthorized disclosure shall be developed and implemented. These include:

- 16.2.2.1 Programs for facility clearances and registration of safeguards and security activities. (DOE O 470.4)
- 16.2.2.2 Program ensuring timely submittal of information for Foreign Ownership, Control or Influence (FOCI) determinations. (DOE O 470.4)
- 16.2.2.3 Measures to identify classified information: DOE O 200.1, DOE M 475.1-1A.
- 16.2.2.4 Controls of classified documents and information: DOE M 470.4-4.
- 16.2.2.5 Physical protection measures for classified information and material: DOE M 470.4-4.
- 16.2.2.6 Controls for hand carrying of classified matter on air carriers: DOE M 470.4-4.
- 16.2.2.7 Personnel security program to limit access to classified information and materials to appropriately cleared individuals with a need to know: DOE M 470.4-5, DOE M 472.1-1B.
- 16.2.2.8 Security education and awareness program: DOE O 470.4.
- 16.2.2.9 Communications security program: DOE O 200.1, DOE M 200.1-1, DOE G 200.1-1.
- 16.2.2.10 Classified computer security program: DOE M 470.4-4, DOE M 471.2-2.
- 16.2.2.11 Controls on classified visits: DOE O 470.4.
- 16.2.2.12 Technical surveillance countermeasures program: DOE M 470.4-4 and DOE TSCM Procedural Manual.

16.2.3 Documented measures to protect unclassified sensitive information and materials from loss or unauthorized disclosure shall be developed and implemented. These include:

- 16.2.3.1 Operations security program: DOE M 470.4-4.

- 16.2.3.2 Information security program: DOE M 470.4-4.
- 16.2.3.3 Counterintelligence program, provided by the Oak Ridge Office of Counterintelligence: DOE O 475.1.
- 16.2.3.4 Guidelines on Export Control and Nonproliferation, July 1999, U.S. Department of Energy.
- 16.2.3.5 Measures to identify, control, and protect unclassified controlled nuclear information (UCNI): DOE O 471.1A, DOE M 471.1-1, Chg 1.
- 16.2.3.6 The Corporation will submit an unclassified computer security plan for DOE's approval. Upon approval, this plan will represent the unclassified computer security standards to which the Corporation will conform (DOE O 205.1, DOE N 205.2, DOE P 205.1, DOE N 205.3, DOE N 205.8, DOE N 205.9, DOE G 205.1-1, DOE M 205.1.1).
- 16.2.3.7 Program to control unclassified visits and assignments by foreign nationals: DOE O 142.3.
- 16.2.3.8 Measures to identify, control, and protect Official Use Only (OUO) information, as appropriate: DOE O 471.3, DOE G 471.3-1, DOE M 471.3-1.

16.2.4 A documented program shall be implemented to ensure that those individuals requiring a DOE-issued Weapons Authorization Card have met the necessary requirements for a Security Police Officer.<sup>4</sup> The program for issuance of Weapons Authorization Cards shall include the following elements:

- 16.2.4.1 A documented program providing the level of information mandated by the Code of Federal Regulations and DOE Orders and Directives for the issuance of Weapons Authorization Cards. (10 CFR 1046, 10 CFR 1047, DOE O 473.2, DOE M 470.4-3, Chg 1)<sup>5</sup>

<sup>4</sup> Within 60 days after issuance of any new DOE orders addressing DOE security interest at Portsmouth, the DOE Regulatory Oversight Manager will inform USEC of the issuance of the new order(s). This notification shall be considered to be a modification the Regulatory Oversight Agreement (ROA). USEC shall come into compliance with such modifications to the ROA within the time specified and directed by DOE.

<sup>5</sup> The citation of specific DOE orders in Section 16.2.1 is applicable to the date of this revision to the ROA. Compliance with current DOE orders shall be maintained as indicated in Note 4 to Section 16.2.

- 16.2.4.2 A documented program for medical, physical fitness training, and firearms that certifies each individual for a Weapons Authorization Card. (10 CFR 1046.12, 10 CFR 1046.13, 10 CFR 1046.16, DOE O 473.2, DOE M 470.4-3, Chg 1)
- 16.2.4.3 Access authorization commensurate with the level of classified matter access. (10 CFR 1046.14, DOE O 473.2, DOE M 470.4-3, Chg 1)
- 16.2.4.4 A documented continuing physical fitness training program. (DOE Medical and Fitness Implementation Guide, dated March 1991, 10 CFR Part 1046)
- 16.2.4.5 A documented program on the use of limited arrest authority and use of force by a Security Police Officer. (10 CFR Part 1047, DOE O 473.2, DOE M 470.4-3, Chg 1)
- 16.2.4.6 A documented program that prohibits any individual convicted in any court of a misdemeanor crime of domestic violence, or discharged under dishonorable conditions from being issued a Weapons Authorization Card. [Omnibus Consolidated Appropriations Act of 1997, Pub. L. No. 104-208, Paragraph 658, (1996); Gun Control Act of 1968, 18 U. S. C. Paragraphs 922 (g) (6) and (g) (9), (1997); 27 CFR Part 178]
- 16.2.4.7 A documented program to ensure that safety policies and procedures are in place for firearms safety (DOE O 440.1A, DOE O 473.2, DOE-STD-1091-96)
- 16.2.4.8 A documented to ensure uniform qualifications and re-qualification of a Security Police Officer. (DOE O 473.2, DOE M 470.4-3, Chg 1)
- 16.2.4.9 Measures to control the issuance and use of security badges, credentials, and shields. (DOE M 470.4-2, Chg 1)

## **17.0 CHEMICAL SAFETY**

### **17.1 Objective**

Chemical safety practices in performing the activities subject to DOE regulation shall be such as to prevent or minimize chemical releases and provide for personnel protection.

## **17.2 Implementation Requirements**

Chemical safety programs shall be established and implemented to:

- 17.2.1 Provide for the adequate storage of chemicals and other hazardous materials.
- 17.2.2 Provide proper personal protective equipment for personnel handling hazardous materials.
- 17.2.3 Ensure hazardous chemicals are adequately identified and communicated to personnel.
- 17.2.4 Ensure that the levels of air contaminants within the GCEP Leased Premises are within the established standards of OSHA.
- 17.2.5 Provide for chemical related medical emergency response.

## **18.0 PACKAGING AND TRANSPORTATION**

### **18.1 Objective**

The Packaging and Transportation program shall maintain compliance with the various USDOT, EPA, and State of Ohio requirements.

- 18.1.1 An individual shall be designated to implement a packaging and transportation program.
- 18.1.2 Coordinate with PORTS site personnel on movements of UF<sub>6</sub>.

### **18.2 Implementation Requirements**

- 18.2.1 Packaging and Transportation procedures shall be established and implemented to:
  - 18.2.1.1 Implement the USDOT and 49 CFR Parts 100-180 requirements for the offsite transportation of hazardous materials (including environmental samples), substances and wastes.
  - 18.2.1.2 Ensure the USDOT and 49 CFR Parts 350-399 requirements for the offsite operation of vehicles with a GVWR of 10,000 lbs or greater.
  - 18.2.1.3 Implement the USDOT, International Civil Aviation Organization (ICAO), International Air Transport

Association (IATA) and 49 CFR Parts 100-180 requirements for the off-site transportation of hazardous materials (including environmental samples), substances and wastes via aircraft.

18.2.1.4 Ensure that transfers of hazardous materials (other than  $\text{UF}_6$ ) are to be in USDOT required packaging.

18.2.1.5 Onsite handling procedures and packaging criteria for  $\text{UF}_6$  shall be in accordance with USEC-651, *Good Handling Practices for Uranium Hexafluoride*, or ANSI N14.1.



## Appendix B to Exhibit M

### Enforcement Process

## APPENDIX B - ENFORCEMENT PROCESS

### GENERAL APPROACH TO ENFORCEMENT PROCESS

The Atomic Energy Act of 1954, as amended, requires DOE to protect the public health and safety, as well as the safety of workers at DOE-owned facilities, and to provide for the common defense and security in conducting its nuclear activities, and grants DOE broad authority to achieve these goals. DOE will exercise its oversight authority both by contract (lease) and by DOE regulations.

DOE provides for nuclear safety management, including quality assurance, under 10 CFR Part 830 and "DOE Nuclear Safety Requirements" for worker radiation protection under 10 CFR Part 835. USEC requested and has been granted an exemption to the requirements of 10 CFR Parts 830 and 835. As such, the Corporation shall perform the gas centrifuge activities related to quality assurance and worker radiation protection, not under the regulation of NRC, in accordance with the conditions specified in the 10 CFR Part 830 and 10 CFR Part 835 Exemption Decisions dated February 2, 2004, as amended, and February 3, 2004, as amended, respectively and the requirements established in this ROA.

The enforcement procedures of 10 CFR Part 820, Appendix A and relevant OPAE Enforcement Guidance Supplements will apply to any potential OPAE violations related to the requirements of the 10 CFR Parts 830 and 835 exemptions decisions. The enforcement process established in this Appendix will apply to any potential ROA violations to the contract (lease) requirements of Appendix A, except any CI violations relating to the security or safeguarding of Classified Information, which will be enforced in accordance with 10 CFR Part 824 "Procedural Rules for the Assessment of Civil Penalties for Classified Information Security Violations".

Consistent with this responsibility, DOE will take prompt and vigorous enforcement actions when dealing with the Corporation when it does not comply with applicable DOE requirements contained in Chapter 3 of the Plan. This Appendix establishes the procedures for (a) investigating the nature and extent of alleged ROA violations of the Nuclear Safety and Safeguards and Security Requirements set forth in Chapter 3 of Appendix A, entitled "Safety Basis and Framework for DOE Oversight of the Gaseous Diffusion Plants;" (b) determining whether a ROA Violation has occurred; and (c) if a ROA violation has occurred, imposing an appropriate remedy, for the contract (lease) requirements of Appendix A.

#### 1. ROA ENFORCEMENT ACTIONS

##### A. Shutdown Authority

###### 1. Clear and Present Danger

Whenever a DOE Inspector or the DOE Regulatory Oversight Manager in carrying out his or her responsibilities, determines that the nuclear safety or safeguards and security conditions at any GCEP Leased Facility constitute a Clear and Present Danger, he or she shall immediately notify the cognizant operations supervisor. If the supervisor fails to take what

the DOE Inspector/site safety representative believes is appropriate and timely action to curtail or suspend the activity or operation, or to mitigate the identified Clear and Present Danger by other means, the DOE Inspector shall notify the plant shift superintendent. The DOE Inspector shall explain the situation and request that the plant shift superintendent take appropriate action to curtail or suspend the activity or operation, or to mitigate the danger by other means. The Corporation agrees that the plant shift superintendent shall take timely action to curtail or suspend the operation, or to mitigate the danger by other means, when so requested by the DOE Inspector when said DOE representative perceives a Clear and Present Danger to exist. The plant shift superintendent shall inform the DOE Inspector of the actions taken to curtail or suspend the activity or operation, or to mitigate the identified Clear and Present Danger by other means. If the DOE Inspector believes that these actions are not sufficient, he or she shall notify the DOE Regulatory Oversight Manager, informing him or her of the details of the situation. If the DOE Regulatory Oversight Manager agrees that the action taken is not sufficient, he or she shall contact the plant superintendent and direct that he or she take specific actions to curtail or suspend the activity or operation, or to mitigate the danger by other means. When so directed by the DOE Regulatory Oversight Manager, the Corporation agrees to take, or cause the operating contractor to take, these specific actions. DOE and the Corporation agree that no written notice is required for DOE to exercise its shutdown authority pursuant to this paragraph.

## 2. Unreviewed Safety Questions

The DOE Regulatory Oversight Manager may also order an activity or operation curtailed or suspended, in the absence of a Clear and Present Danger, when he or she concludes that continued operation would involve an Unreviewed Safety Question, as defined in this Agreement.

### B. ROA Notice of Violation

In the event of an alleged ROA Violation, the DOE Regulatory Oversight Manager shall provide USEC with a written ROA Notice of Violation. The written ROA Notice of Violation shall concisely describe the alleged failure of the Corporation to meet one or more of the Nuclear Safety and Safeguards and Security Requirements in effect at the time of the alleged ROA Violation. In particular, the ROA Notice of Violation shall specify the date or dates, facts, and the nature of the alleged acts or omissions constituting the ROA Violation, and shall identify specifically the particular provision or provisions of the Nuclear Safety and Safeguards and Security Requirements involved in the alleged ROA Violation. Within 30 days of the date of the notice or other time period specified in the notice, USEC will submit a written reply. USEC may admit or deny the alleged ROA Violation and state the reasons for the ROA Violation, if admitted. In the event the alleged ROA Violation is admitted, this reply shall also contain an explanation or statement including: (1) corrective steps that have been taken by USEC or others and the results that have been

achieved; (2) corrective steps that will be taken; (3) the date when full conformance with the Nuclear Safety and Safeguards and Security Requirements in the identified area will be achieved.

C. ROA Civil Penalties

1. Prior to imposing any ROA Civil Penalty on the Corporation, the DOE Regulatory Oversight Manager shall provide to USEC a written ROA Notice of Violation, as described above, and a Notice of Proposed Imposition of ROA Civil Penalty and shall state that the ROA Civil Penalty may be paid in the amount specified therein or the proposed imposition of the ROA Civil Penalty may be protested in its entirety or in part, by a written answer either denying the ROA Violation or showing extenuating circumstances. The Corporation agrees to either pay the ROA Civil Penalty in the amount proposed or answer the Notice Of Proposed Imposition of ROA Civil Penalty within 30 days of the date of a Notice Of Proposed Imposition of ROA Civil Penalty or other time specified in that notice. The answer to the Notice of Proposed Imposition of ROA Civil Penalty shall state any facts, explanations, and arguments, denying the alleged ROA Violation, or demonstrating any extenuating circumstances, error in the ROA Notice Of Violation or other reason why the Proposed ROA Civil Penalty should not be imposed and may request remission or mitigation of the proposed ROA Civil Penalty. If the Corporation files an answer to the Notice of Proposed Imposition of ROA Civil Penalty, the DOE Regulatory Oversight Manager, upon consideration of the answer, will issue a revised Notice of Proposed Imposition of ROA Civil Penalty imposing, mitigating, or remitting the ROA Civil Penalty. The Corporation agrees to either pay the ROA Civil Penalty in the amount specified or appeal the decision to the DOE ORO Manager within 30 days of the issuance of that revised Notice of Proposed Imposition of ROA Civil Penalty. Any appeal shall be presented in writing, with an opportunity for the Corporation to be heard, if so requested.
2. The amount of the ROA Civil Penalty imposed shall be based upon the severity of the ROA Violation, including the potential for the ROA Violation to affect the public health and safety or the common defense and security and whether it was a repeat ROA Violation, the actions taken to respond to the ROA Violation, and any extenuating circumstances. ROA violations of contract (lease) requirements, except the safeguarding and security of Classified Information, and any ROA civil penalties for these ROA violations shall be assigned by the DOE Regulatory Oversight Manager, in accordance with the severity level guidance provided in Appendix A of 10 CFR Part 820. CI violations and CI civil penalties regarding the safeguarding and security of Classified Information will be assigned in accordance with the requirements of 10 CFR Part 824.

3. ROA Civil Penalties imposed on the Corporation pursuant to this Agreement shall not be subject to reimbursement under Sections 5.3 of ARTICLE V, entitled "Allocation of Liabilities," or ARTICLE X, entitled "Price-Anderson Indemnification", of the GCEP Lease.

D. Failure to Take Agreed upon Actions

In the event of the failure of the Corporation to take the actions in accordance with this Agreement, the DOE ORO Manager shall take such actions as he or she deems appropriate, consistent with the terms of this Agreement and the GCEP Lease, including, but not limited to, a recommendation to the DOE Lease Administrator that he or she take steps to initiate an orderly termination of the GCEP Lease, to provide adequate assurance that the Corporation's operation of the GCEP Leased Premises does not pose undue risk to the public health and safety or result in failure to provide for the common defense and security. Notification of the actions taken under such circumstances will be provided to USEC in the form of directives issued by the DOE ORO Manager.